

REMARKS

The present claims relate to an ink supporter.

Status of the claims

Claims 17-21 and 25-31 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Haruta et al. (U.S. Patent No. 5,182,579) in view of Mochizuki et al. (U.S. Patent No. 5,477,963) (hereinafter "Haruta" and "Mochizuki," respectively). Claims 22, 24 and 32 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Haruta in view of Mochizuki and Konica Corp. (JP 09-107258) (hereinafter "Konica").

Response to claim rejections

Applicants respectfully submit that the primary reference in each of the § 103 rejections, Haruta, discloses a structure that is distinct from the structure presently claimed, and that neither Mochizuki nor Konica remedy this deficiency. Accordingly, Applicants respectfully request the reconsideration and withdrawal of the § 103 rejections set forth in the Office Action.

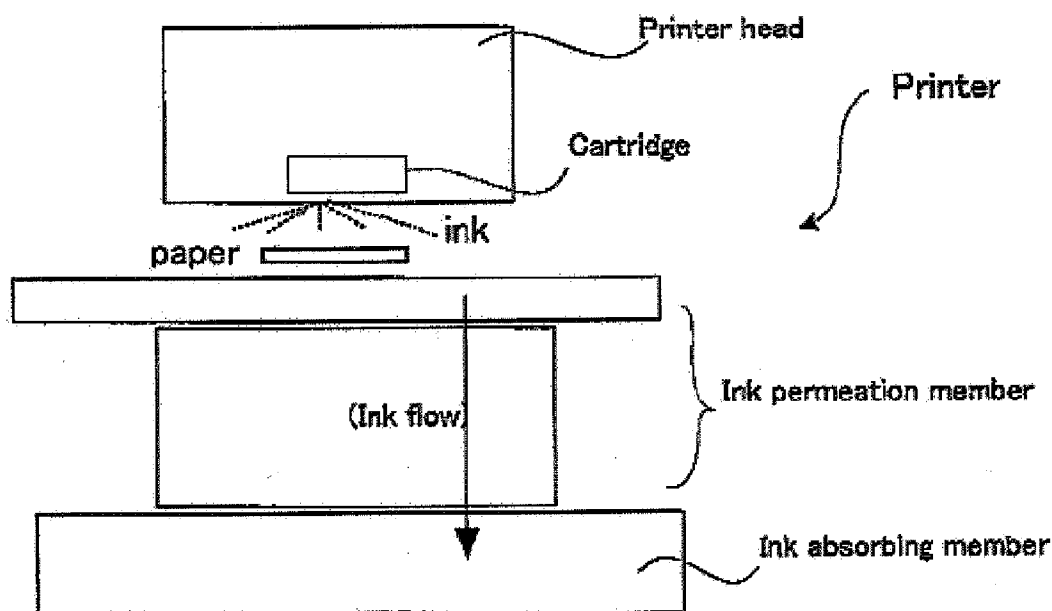
Specifically, Applicants respectfully submit that Haruta does not anticipate or render obvious the presently claimed invention because (1) the ink supporter of the present claims is distinct from the ink-jet ink storing absorbent material of Haruta; (2) the use of the polyurethane foam recited in the present claims does not correspond to the use of the polyurethane foam disclosed within Haruta; and (3) due to the different uses of the polyurethane foams in the present claims and in Haruta, the polyurethane foam in Haruta does not possess the same

properties possessed by the presently recited polyurethane foam, and hence does not correspond to the presently recited polyurethane foam.

First, Applicants respectfully submit that the ink supporter of the present claims is distinct from the ink-jet ink storing absorbent material of Haruta. The present claims recite, in part, an ink supporter that includes an ink permeation member provided at a portion corresponding to a printer head and an ink absorbing member being in contact with the ink permeation member. Ink that has flowed out of a printer head permeates in the ink permeation member, is absorbed in the ink absorbing member through the ink permeation member, and is supported by the ink absorbing member. Conversely, Haruta discloses in column 1, lines 27-31 that known, typical polyurethane foams (ink absorbing material) are used as an ink storing material employed in such ink-jet cartridges. In other words, the polyurethane foams disclosed in Haruta are used for holding ink in ink-jet cartridges - which is distinct from the ink supporter of the present claims. Specifically, Applicants note that the presently recited ink supporter contains an ink permeation member (where ink that flows out of a printer head is permeated) and an ink absorbing member (where ink is absorbed through the ink permeation member and is supported). Such a structure is distinct from the ink-jet cartridge disclosed in Haruta. Therefore, Applicants respectfully submit that Haruta does not anticipate or render obvious the ink supporter of the present claims.

Second, Applicants note that the polyurethane foam recited in the present claims does not correspond to the polyurethane foam disclosed within Haruta. As discussed above, the polyurethane foam in Haruta is used in an apparatus that is distinct from the presently claimed

ink supporter. In Haruta, the polyurethane foams are used within the ink-jet cartridge, and the ink on the polyurethane foam is supported and exhausted from the polyurethane foam (which is in the cartridge) when printing occurs. On the other hand, in the present invention, both the ink permeation member and the ink absorbing member are used to absorb and support the excessive ink after printing, as illustrated in the figure below:



Accordingly, Applicants respectfully submit that Haruta does not anticipate or render obvious the polyurethane foam of the present claims.

Third, Applicants wish to point out that the polyurethane foam in Haruta does not correspond to the presently recited polyurethane foam because it does not possess the same properties as the presently recited polyurethane foam. As discussed above, the polyurethane foam in Haruta is utilized in a manner different from the manner in which the polyurethane is utilized in the present invention. Not surprisingly, the polyurethane foam in Haruta requires

physical properties distinct from the physical properties of the polyurethane foam of the present claims. For example, the polyurethane foam in the ink-jet cartridge in Haruta requires that the elution of impurities from the polyurethane foam into the ink must be as small as possible. Otherwise, the ink may fail to adhere to the paper substrate. However, if the polyurethane foam recited in the present claims were to be used for in the cartridge in Haruta, the surface active agent that is adhered on the surface of the polyurethane foam would flow into ink, lowering the printing performance of the ink. Similarly, if the polyurethane foam in Haruta were used in the present invention, the results would correspond to the evidence presented in the Declaration attached to the Amendment of November 22, 2006, which demonstrated the unexpectedly superior suction rates of the presently claimed invention over the comparative examples, which were representative of Haruta.

Another property that renders the polyurethane foam in Haruta distinct from the polyurethane foam recited in the present claims is that in the polyurethane foam in Haruta, the speedy absorbance and permeation of ink into the polyurethane foam is not required. This is because the polyurethane foam in Haruta needs only to prevent the bubbling of ink that can result from an ink tank (such as ink cartridge) continuously moving or shifting left and right. However, in the present invention, at least the ink permeation member requires the ability to readily absorb and support an ink in order to prevent the retention of excessive ink on paper. In addition, the polyurethane foam recited in the present claims must also have a lower capillary effect than the ink absorbing member as a main body in order to prevent the ink from either failing to absorb or from clogging when it dries, e.g., when there has been no use of the member for a given period

of time. Hence, Applicants respectfully submit that Haruta does not anticipate or render obvious the presently recited polyurethane foam because the polyurethane foam in Haruta is different from the polyurethane foam recited in the present claims, based upon the physical properties of the polyurethane foams.

In summary of Applicants' position with respect to Haruta, Applicants respectfully submit that Haruta does not anticipate or render obvious the presently claimed invention because (1) the ink supporter of the present claims is distinct from the ink-jet ink storing absorbent material of Haruta; (2) the polyurethane foam recited in the present claims does not correspond to the polyurethane foam disclosed within Haruta; and (3) due to the different uses of the polyurethane foams in the present claims and in Haruta, the polyurethane foam in Haruta does not possess the same properties possessed by the presently recited polyurethane foam, and hence does not correspond to the presently recited polyurethane foam.

Further, Applicants respectfully note that Mochizuki and Konica similarly do not disclose the polyurethane foam of the present claims. With specific reference to Konica, Konica discloses a dye ink for ink jets containing 0.001 to 0.1 wt% of dialkyl sulfosuccinate compounds. However, the amount of the compounds do not contribute to the ability of polyurethane foam to readily absorb an ink, for if the amount of the surfactant is too large, the quality of the ink will degenerate. Accordingly, neither Mochizuki nor Konica disclose the polyurethane foam of the present claims.

Applicants respectfully submit that the combined teachings of Haruta, Mochizuki, and Konica do not anticipate or render obvious the present claims. Accordingly, Applicants

RESPONSE UNDER 37 C.F.R. § 1.116
Appln. No. 10/734,167

Atty. Docket No. Q78821

respectfully request the reconsideration and withdrawal of the § 103 rejections set forth in the Office Action.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

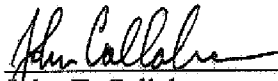
Respectfully submitted,

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